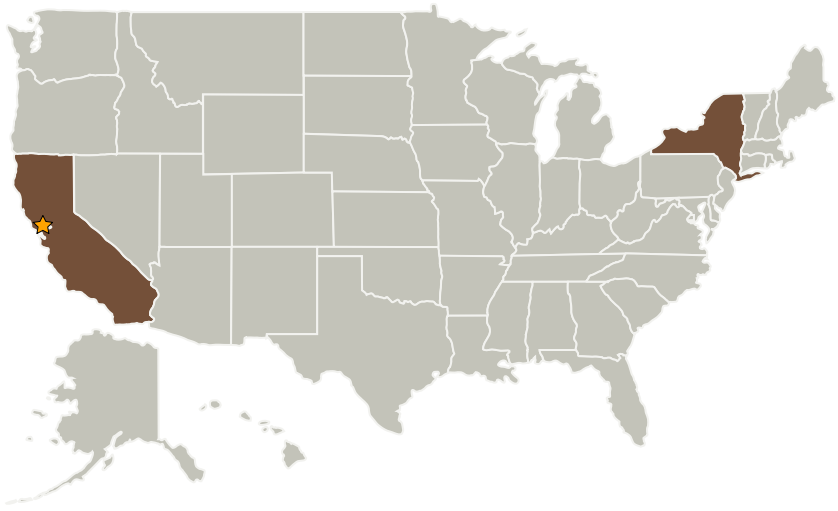
HyDE Enhancements for IVHM System Deployment, Phase I

Completed Technology Project (2008 - 2008)

Project Introduction

Impact Technologies LLC, with support of the University of California Santa Cruz, proposes to develop and demonstrate a set of enhancements to NASA's Hybrid Diagnostic Engine (HyDE) that represent valuable and, in some cases, critical features for IVHM system developers in NASA and non-NASA application domains. Specifically, the Impact team believes that in order for HyDE to transition to a broad customer base, HyDE must meet commercial-grade software standards as well as provide 1) an innovative and powerful software-based model validation and verification environment must be integrate with Matlab/Simulink, 2) sophisticated third party plug-ins to translate from a Bayesian Network modeling paradigm and integrate generic signal validation tools and 3) the capability to generate and deploy models for common embedded targets in an efficient and user friendly package. The project team intends to define, develop and demonstrate the feasibility of these innovative and significant enhancements to HyDE with NASA's Advanced Diagnostic and Prognostics Testbed (ADAPT) as a realistic and sufficiently complex case study.

Primary U.S. Work Locations and Key Partners



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Ames Research Center (ARC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Organizations Performing Work	Role	Type	Location
★Ames Research Center(ARC)	Lead Organization	NASA Center	Moffett Field, California
Impact Technologies, LLC	Supporting Organization	Industry	Rochester, New York

Primary U.S. Work Locations	
California	New York

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Gregory Kacprzynski

Technology Areas

Primary:

- TX11 Software, Modeling, Simulation, and Information Processing
  - TX11.4 Information Processing
    - TX11.4.3 Semantic Technologies